

Amendments to the Specification

Amend the paragraph beginning on page 13 at line 15 as follows:

Further, the characteristics of the beam emitting from the discharge holes 14a of the beam-emitting electrode 14 greatly differ according to the length of the discharge holes 14a. Hence, the length of the discharge holes 14a must be selected according to the desired use of the beam source. A length of 1-5 times the hole diameter is appropriate for emitting electrons, ions, radicals, neutral particles having a low neutralization rate, and the like, creating a broad beam downstream from the beam-emitting holes. When the hole length is 5-10 times the hole diameter, the beam directivity improves, enabling localized irradiation of radical and electron beams. This length can achieve a neutralization rate for a neutral particle beam of about 30-70%. When the hole length is 10 times or greater that of the diameter, it is possible to obtain a beam of even greater directivity and a neutral particle beam having a neutralization rate of about 70% or greater. In the present embodiment, the thickness of the beam-emitting electrode is 2 millimeters, while the ratio of ~~hole diameter to~~ the length of the beam-emitting holes to the hole diameter is preferably 2 or greater.